

Sewer in Alley and Right-of-Way
bet. Hanna St. and Weiner Park and
from Alley north of Rudisill Blvd.
to ~~Atkinson~~ Weiner Park

Local Sewer Imp. Res. No. 257

Plans and Specifications Approved

April 27th 1916

Resolution Adopted

April 27th 1916

Confirmed

May 18th 1916

Proposal

June 15th 1916

Contract and Bond

June 29th 1916

Contractor

Francis & Co.

Engineer's Report

Work Accepted

Dec. 7th 1916

STATE OF INDIANA }
ALLEN COUNTY } ss:

In the Matter relating to the Improvement made under Improvement Resolution

No. 257 and the plans and specifications therefor comes now

J. E. K. France who being

duly sworn upon oath deposes and says he is acquainted with

France the party

to whom was awarded the contract and who performed the work under Improvement

Resolution No. 257

That he is familiar with and personally knows the requirements of the plans and specifications of said improvement resolution and further knows that the said

France in the

performance of said work complied with all the terms and conditions of said plans and

specifications in every particular, and that the material used was of the character, kind,

quantity and quality required therein and according to and under the direction of the Board

of Public Works and the City Civil Engineer.

J. E. K. France

Subscribed and sworn to before me this 24th day of October, 1916

My Commission Expires Feb. 6, 1918

A. M. Sullivan

Notary Public, Allen County, Indiana

CONTRACT AND BOND.

This Agreement, Made and entered into this 29th day of June 1916.

by and between France and Company,

the County of Allen and State of Indiana, party of the first part, and the City of Fort Wayne, County of Allen, State of Indiana, by and through its Board of Public Works, party of the second part, under and by virtue of an Act of the General Assembly of the State of Indiana, entitled "An act concerning the incorporation and government of cities having more than thirty-five thousand and less than forty-nine thousand population according to the United States Census last preceding, and matters connected therewith, and declaring an emergency," approved March 3rd, 1893, and amendments thereto.

Witnesseth, That the party of the first part covenants and agrees to construct a vitrified clay pipe sewer in and along the alley and right-of-way between Hanna Street and Weisser Park Avenue from alley North of Rudisill Boulevard to Weisser Park Avenue Said sewer shall be twelve and fifteen inches in diameter and said contractor in building said sewer agrees to furnish all labor and material whatsoever and to do all work in a good workman-like manner to the entire satisfaction of the Board of Public Works and the City Civil Engineer at the following price per lineal foot.

Price per lineal foot:-- One dollar and thirty-three cents (\$1.33)

The said party of the first part expressly agrees to make the improvements herein specified in strict accordance with the provisions of Local Sewer Improvement Resolution No. 257, and in accordance with the plans, profiles and specifications for the improvement on file in the office of the Department of Public Works of said city. The resolutions, profiles, plans, specifications and bids for work herein specified are hereby made a part of this contract as fully and effectually as herein set out in full.

The said party of the first part further agrees to do and perform all of said work to the entire satisfaction of the Board of Public Works and to complete the same by the 1st day of December 1916. To each of the conditions and stipulations of this contract the undersigned bind themselves, their successors and assigns.

In Witness Whereof, We, the foregoing named parties hereunto set our hands this 29th day of June 1916.

France & Co
E. J. K. France
Contractor, party of the first part.

This contract approved by us this 29th day of June 1916

Robert E. Kelly
Robert E. Kelly
Henry E. Kelly
Board of Public Works,
Party of the second part.

My J. Henry
Mayor.

STATE OF INDIANA
COUNTY OF MARION

ss:

Before me, a notary public in and for said county and state, personally appeared NATIONAL SURETY COMPANY, by L.C. Braumig, attorney-in fact, surety on the foregoing bond and acknowledged the execution of the same for the uses and purposes therein expressed, without condition or reservation.

Witness my hand and official seal this 28th day of June, 1916,

My commission expires,
My commission expires Jan. 7, 1918

Geo. J. Reinhard,

Notary Public

Know All Men by these Presents, That we France and Company

Fort Wayne, Indiana, as principal and NATIONAL SURETY COMPANY,

New York City, New York.

..... of the County of Allen,
and State of Indiana, as sureties, are held and firmly bound to the City of Fort Wayne, Indiana, in the sum of

Five thousand dollars DOLLARS,

(\$ 5000.00) for the payment of which, well and truly to be made, we jointly and severally bind ourselves, our heirs, executors, administrators and assigns firmly by these presents.

The conditions of the above obligation are such that if the above named party of the first part shall faithfully

comply with the foregoing contract made and entered into the 29th day of June 1916
with the City of Fort Wayne, Indiana, and shall fulfill all the conditions and stipulations therein contained, according to the true intent and meaning thereof in all respects, then this obligation to be void, otherwise to be and remain in full force and virtue in law; and in the event the said City shall extend the time for the completion of said work, such extension shall not in any way release the sureties on this bond.

Witness our hands and seals the day and date above written;

France & Co. (SEAL.)

J. E. K. France (SEAL.)

NATIONAL SURETY COMPANY. (SEAL.)

By [Signature] (SEAL.)

Attorney-in-fact.

This bond approved by us this 29th day of June 1916

Robert E. Koss

Wm. E. Shingary

Henry S. Liffman

} Board of Public Works.

STATE OF INDIANA, }

ALLEN COUNTY, }

ss:

The undersigned, surety on the above bond, does each for himself solemnly swear that he is the owner in fee simple, in his name and right, of real estate, situated in Allen County, Indiana, which real estate is clear and wholly unencumbered, and of the value of at least the amount named in the above bond, and that he is not surety on any other bond, note or obligation exceeding one-third the value of his unencumbered real estate.

Signed :

.....
.....
.....

Subscribed and sworn to before me, a Notary Public, in and for said County and State,

this day of 190.....

..... Notary Public.

STATE OF INDIANA, }
ALLEN COUNTY. }

The undersigned, surety on the above bond, does each for himself solemnly swear that he is the owner in fee simple, in his own name and right, of real estate, situated in Allen County, Indiana, which real estate is clear and wholly unencumbered, and of the value of at least the amount named in the above bond

Signed :

.....
.....
.....

Subscribed and sworn to before me, a Notary Public in and for said County and State,

this.....day of.....190.....

.....Notary Public.

**DEPARTMENT OF PUBLIC WORKS,
OFFICE OF THE BOARD.
CITY HALL.**

FORT WAYNE, IND.,.....190.....

To whom it may concern:

The time in which to complete the within contract is hereby extended by the Board of Public Works of the City of Fort Wayne, Indiana, until.....

.....
.....
.....
Board of Public Works.

**DEPARTMENT OF PUBLIC WORKS.
OFFICE OF THE BOARD.
CITY HALL.**

FORT WAYNE, IND.,.....190.....

To whom it may concern:

The time in which to complete the within contract is hereby extended by the Board of Public Works of the City of Fort Wayne, Indiana, until.....

.....
.....
.....
Board of Public Works.

**DEPARTMENT OF PUBLIC WORKS.
OFFICE OF THE BOARD.
CITY HALL.**

FORT WAYNE, IND.,.....190.....

To whom it may concern:

The time in which to complete the within contract is hereby extended by the Board of Public Works of the City of Fort Wayne, Indiana, until.....

.....
.....
.....
Board of Public Works.

No., 190.....

Contract and Bond
OF

FOR

AMOUNT OF BOND.

Dollars.

Approved:

Board of Public Works.

Record in Contract Record Book No.

Page.....

Recorded in Imp. Res. Record Book No.

Page.....

Imp. Res. No. 190.....

Cost per Lineal Foot, \$.....

Assessm't Roll App'd.....

Final Estimate App'd.....

SEWER PROPOSAL

Fort Wayne, Ind., June 15 1916.

TO THE BOARD OF PUBLIC WORKS OF THE CITY OF FORT WAYNE, IND.

Gentlemen: The undersigned propose to construct a Vitrified Clay Pipe sewer with all its appurtenances in and along the alley and right-of-way between Hanna Street and Weisser Park Avenue from alley North of Rudisill Boulevard to Weisser Park.

including any and all work and material that may be necessary, and in a proper and workmanlike manner, and according to plans, profile and specifications on file in the office of the Board of Public Works of said City, and according to the terms of Sewer Improvement Resolution No. 257 1916 and according to the laws, ordinances and regulations of the City of Fort Wayne, and under the direction and to the entire satisfaction of said Board of Public Works, at the following rate per lineal foot of said sewer complete.

PRICE WRITTEN IN WORDS HERE	FIGURES HERE	
	DOLLARS	CENTS
Price per lineal foot <i>One dollar & thirty three cents</i>	1	33
Enclosed find Certified Check in the sum of <u>One hundred dollars</u>	\$100	00

Francis J. Co CONTRACTOR

In signing this proposal the contractor waives the right to have issued to him monthly estimates of work and certificates of 65 per cent. of amount shown by such estimates.

Errors or differences between written prices and figures will be considered intentional and proposals rejected as informal.

A failure to enclose certified check, as provided for in legal advertisement of "Notice to Contractors" will result in the rejection of the bid.

Bids will be rejected for a failure to make an affidavit in accordance with with Section 65, Chapter CIV, Acts of 1899.

The striking out of any of the provisions of this form or making any interlineations or erasures without the consent of the Board of Public Works being first obtained, will result in the rejection of the proposal as informal.

All bids must have been delivered to the Clerk of the Board of Public Works by 7:30 o'clock P m. June 15th 1916 as no bids will be accepted after that hour.

LOCAL SEWER IMPROVEMENT RESOLUTION

No. 257, 191

RESOLVED BY THE BOARD OF PUBLIC WORKS OF THE CITY OF FORT WAYNE, STATE OF INDIANA, That the construction of a local sewer, intended and adopted only for local use by the property holders whose property abuts thereon, and not intended or adapted for receiving sewage from collateral drains, be and the same is hereby ordered in and along *the alley and right of way between Hanna Street and Weisser Park Avenue from alley north of Rudisill Boulevard to Weisser Park* said sewer to be twelve and fifteen (12" & 15") inches

Number 133

in diameter, and said sewer, with all its appurtenances, shall be constructed in accordance with the profile and specifications now on file in the office of the Department of Public Works of said city.

The cost of said improvement shall be apportioned against and paid by the property holders whose property abuts thereon, and upon the City of Fort Wayne, Indiana, if the city is benefited by said improvement, all according to the method and manner provided for in an Act of the General Assembly of the State of Indiana, entitled, "An Act Concerning Municipal Corporations," approved March 6, 1905, and the provisions of all Acts amendatory thereto and supplemental thereof.

Assessments, if deferred, are to be paid in ten equal annual installments, with interest at the rate of five per cent. per annum. A bond or bonds shall be issued to the contractor in payment of such work, unless the property owners pay said assessments before said bond or bonds are issued. Under no circumstances shall the City of Fort Wayne be or be held responsible for any sum or sums due from said property owner or owners for said work, or for the collection of the same, or for the payment of any bond or bonds, certificate or certificates, issued to said contractor in payment for such work, except for such moneys as shall have been actually received by the city from the assessments for such improvement, or such moneys as said city is by said above entitled act required to pay. All proceedings had and work done in the making of said improvement, assessment of property, collection of assessments and issuance of bonds therefor, shall be as provided for in said above entitled act and all amendments and supplements thereto.

Adopted, this

27th

day of

April

191*6*

BOARD OF PUBLIC WORKS:

Robert E. Kiser
Robert E. Kiser
Henry J. Johnson

NAME OF BIDDER

Super in

[illegible]

Filed

191.

Received enclosed deposit of \$

G. C. Moore

LOCAL SEWER

Improvement Resolution No. _____, 191

For the construction of a Local Sewer in and along

Resolution Adopted _____
Advertised for hearing _____

Engineer's Estimate, \$ 23,401¹⁵
Action of Board _____

Bids to be Received _____

Contractor _____

Price _____

Remonstrances _____

Final Assessment Roll App'd _____

Recorded Res. Record No. _____, page _____

DEPARTMENT OF PUBLIC WORKS

CITY OF FORT WAYNE, INDIANA

Sewer Improvement Specifications

For the construction of a 12" & 15" Vitreous Clay Pipe Sewer,
with all its appurtenances in and along the alley and right of way
between Hanna Street and Weiser Park Avenue
from the alley north of Endicott Boulevard to
Weiser Park

Under Local Sewer Improvement Resolution Number 257 passed by the Board of Public Works
of the City of Fort Wayne, Indiana, the 27th day of April 1916.

Approved: _____

Board of Public Works.

INSTRUCTIONS TO BIDDERS

Sealed proposals for this work, indorsed with the title of the improvement, the name of the bidder and the date of its presentation, will be received at the office of the Board of Public Works until 7.30 o'clock P.M., June 15 1916, at which time, or as soon thereafter as possible, the Board will publicly open and duly consider all proposals.

The Board of Public Works, expressly reserves the right to reject any and all bids, at its discretion.

All bids shall be filed with the Clerk of the Board of Public Works on or before the day and hour above set out and stated in the advertisement, and no proposal after this time will be accepted.

Permission will not be given for the withdrawal, modification or explanation of any proposal after the same has been filed.

No bid will be accepted from, or contract awarded to, any person, firm or corporation that is in arrears to the City of Fort Wayne upon any debt or contract; or who has failed to execute in whole or in part in a satisfactory manner, any contract with the City, or who is a defaulter as to surety or otherwise upon any obligation to the city of Fort Wayne.

All bids, also all bonds, filed by those to whom contracts may be awarded, must be made upon the printed blanks provided therefor by the Board of Public Works.

Each bidder must state in their proposal, both in words and in figures, in the respective columns provided for the same, without any interlineations, alterations or erasures, the price per lineal foot, complete, for which he will supply all material and perform all work required by the drawings and specifications. He must sign his proposal with his full name and give his address.

Each bidder is required to file with his bid a certified check, drawn on some responsible bank, for an amount not less than two and a half ($2\frac{1}{2}$) per cent of the Engineer's estimate of the cost of the work bid upon, but in no case shall any such check be for an amount less than one hundred (\$100.00) dollars.

In case the bid is not accepted, this check will be returned to the bidder; but if the bid is accepted and the bidder shall refuse or neglect to enter into a contract with the City of Fort Wayne, Indiana, within ten (10) days from the time he shall have been notified of the acceptance of the same, said check shall be forfeited to the City of Fort Wayne, Indiana, as ascertained and liquidated damages for failure so to do.

The successful bidder, at the time of signing the contract with the City of Fort Wayne, Indiana, through its Board of Public Works, to do the work according to plans and specifications, will be required to furnish such bonds as is designated in general specifications.

Persons, firms or corporations submitting propositions shall demonstrate to the satisfaction of the Board of Public Works that they have the proper facilities, expert workmen and experience to execute the contract in a proper manner, otherwise their bid will not be considered.

The work embraced in the contract shall be begun within three weeks after written notice so to do shall have been given to the Contractor by the Board of Public Works, and carried on regularly and uninterruptedly thereafter (unless the said Board of Public Works shall otherwise, in writing, specially direct), with such force as to secure its full completion on or before the.....day of191.....

Plans and profiles are on file in the office of the Department of Public Works and bidders are cautioned to exercise their own judgment by a personal examination of the specifications, plans, profiles, the location of the proposed work, the nature of the excavations to be made and the whole of the work to be done before submitting their bids. They must satisfy themselves as to the accuracy of the estimate of the work to be done and shall not at any time after the opening of the bids dispute or complain of the statements or estimates of the City Civil Engineer nor assert that there was any misunderstanding as to the nature or the amount of the work to be done. The estimate is believed to be correct, but is not guaranteed to be correct, and the City of Fort Wayne will not be responsible for any errors or inaccuracies in the plans, profiles or specifications.

ENGINEER'S ESTIMATE

The Engineer's estimate of the work to be done under these Specifications, by which the relative rates of the bids will be calculated, is as follows, viz:

.....foot.....inch Brick Sewer, complete.....ring.....	.....lineal feet.
.....foot.....inch Brick Sewer, complete.....ring.....	.....lineal feet.
.....foot.....inch Brick Sewer, complete.....ring.....	.....lineal feet.
.....foot.....inch Concrete Sewer, complete.....	.....lineal feet.
.....foot.....inch Concrete Sewer, complete.....	.....lineal feet.
.....foot.....inch Concrete Sewer, complete.....	.....lineal feet.
For 12 inch Pipe Sewer, complete.....	998.....lineal feet.
For 15 inch Pipe Sewer, complete.....	507.....lineal feet.
For 18 inch Pipe Sewer, complete.....	.....lineal feet.
For 20 inch Pipe Sewer, complete.....	.....lineal feet.
For 24 inch Pipe Sewer, complete.....	.....lineal feet.
For .....inch Pipe Sewer, complete.....	.....lineal feet.
For .....inch Pipe Sewer, complete.....	.....lineal feet.
For .....inch Pipe Sewer, complete.....	.....lineal feet.
For 12 inch Pipe Connections for Catch Basins.....	12.....lineal feet.
For 15 inch Pipe Connections for Catch Basins.....	.....lineal feet.

8 inch Slants in Brick Sewer.....	Number
12 inch " " " "	"
15 inch " " " "	"
18 inch " " " "	"
20 inch " " " "	"
24 inch " " " "	"
.....by 12 inch Y Branches in Pipe Sewer.....	"
.....by 15 inch Y Branches in Pipe Sewer.....	"
.....by 18 inch Y Branches in Pipe Sewer.....	"
.....by 20 inch Y Branches in Pipe Sewer.....	"
.....by 24 inch Y Branches in Pipe Sewer.....	"
Catch-Basins, Plan No. 3.....	"
Catch-Basins, Plan No. 8.....	"
Catch-Basins, Plan Common.....	1....."
Manholes, round, Plan.....	"
" oval "	6....."
" special "	"
Concrete	Cubic yards
Timber	Feet, B. M.

The above quantities are supposed to be correct, but are not guaranteed to be correct. The total length given is the estimated length. The actual length constructed will be paid for. The price bid must include all items specified and bids must be made per lineal foot, for all work complete as herein specified.

The bidder, in submitting his bid, must state the price per lineal foot, which price shall be ascertained by dividing the total cost of the Sewer, including all its appurtenances, as shown on the plans and specifications by.....1505.....lineal feet, the length of the sewer.

SPECIFICATIONS

Definition of the Board of Public Works.

1. Whenever the words "Board of Public Works" are used in the specifications they shall be held to mean the Board of Public Works of the City of Fort Wayne, the representative in this contract, of the City of Fort Wayne, Indiana.

Definition of Engineer.

2. Whenever the word "Engineer" is used it shall be held to mean the City Civil Engineer of the Board of Public Works.

Definition of Contractor.

3. Whenever the word "Contractor" is used it shall be held to mean either any Contractor or firm of Contractors, or any member of a firm contracting for any of the work, or any corporation undertaking a contract.

Work to be staked out by the Engineer.

4. The work to be done under this agreement will be staked out by the Engineer or his assistants and the Contractor will be required to carefully preserve all stakes, until authorized to remove them by the Engineer or his assistants, and any expense in replacing said stakes which the Contractor or his subordinates may have failed to preserve shall be borne by the Contractor.

Contractor to give 24 hours' notice in writing when the service of the Engineer is required.

5. The Contractor shall give twenty-four (24) hours' notice in writing when he shall require the service of the Engineer for laying out any portion of the work. He shall furnish any reasonable assistance that may be required to drive stakes for laying out the work.

TRENCHES

Excavation.

6. The trenches shall be excavated to the width and depth required to construct the sewers. Where excavation is in rock, hard-pan, or other firm earth, it shall be made to conform as nearly as practicable to the form of the invert of the sewer, and any irregularities in excavation beyond the line of the form of the invert of the sewer will be filled in with concrete or rubble masonry, as hereinafter specified, to shape the bottom of the trench to the required form of the invert. The excavation and the cost of refilling the trench, and disposal of surplus material, as hereinafter provided, must be included in the price bid per lineal foot for sewer.

No tunneling allowed.

7. No tunneling will be allowed unless, in the opinion of the Engineer, it may be necessary.

Removing surface.

8. The Contractor will carefully remove all paving material, both surface and foundation, and preserve same clean and free from dirt, so that the material can be subsequently used in the restoration of the street, as per paragraph 83 of these specifications. Any loss in the paving material must be supplied at the expense of the Contractor.

Sheeting, etc.

9. The sides of the trenches shall be supported by suitable braces, rangers and sheeting wherever necessary. All such braces, rangers and sheeting must be left in place, if so ordered by the Engineer, for the protection of pipes, buildings, streets, or other structures. The sheeting must be cut off at a depth of not less than one foot below the original surface of the excavation.

Water and gas pipes, etc.

10. The contractor will be required to sustain by timbers and sufficient chains all water or gas pipes, conduits, railway tracks, etc., which may in any way be affected by the work, and to do everything necessary to protect, support and sustain water or gas pipes, lamp posts, service pipes and other fixtures laid along or across the street. In case any of the said gas or water pipes or conduits shall become damaged, they shall be repaired by the authorities having control of the same, and the expense of said repairs shall be paid by the Contractor.

Streets and gutters to be kept open.

11. The Contractor shall make provisions at all cross streets for the free passage of vehicles and foot passengers, either by bridging or otherwise, and shall not obstruct the gutters of the street nor prevent in any manner the flow of water in same, but shall use all proper and necessary means to permit the free passage of the surface water along the gutter, special care being taken to inconvenience as little as possible the citizens residing along the line of work. The Contractor shall immediately cart away all offensive matter, exercising such precautions as may be directed by the Board.

Trench to be fenced and lighted at night.

12. The Contractor shall erect and keep erected a fence or railing around the excavation, if required, and place sufficient red lights on or near the work, and keep them burning from twilight in the evening until sunrise, and shall employ a watchman as an additional security whenever the same shall be needed or required by the Board; and will be held responsible for any damages that any party or the City may sustain in consequence of neglecting the necessary precaution in prosecuting this work.

Length of trench.

13. No more than two hundred (200) feet of trench shall be opened at any time in advance of the completed portion of the sewers, unless by permission of the Board.

Pumping and bailing.

14. The Contractor shall pump out or otherwise remove any water which may be found or shall accumulate in the trenches, and shall form all dams or other work necessary for keeping the excavation clear of water.

No work will be allowed to be laid in water, and no water will be allowed on any work until the cement has set perfectly.

Quicksand. 15. When running sand, quicksand or other bad or treacherous ground is encountered, the work shall be carried on with the utmost vigor, and shall be proceeded with day and night, should the Board so require.

Foundations 16. Whenever, in the judgment of the Engineer, the natural bottom of the trench is not a suitable one on which to build a sewer, the Contractor shall excavate the trench to such increased depth and width as the Engineer may decide to be necessary, and shall bring it up to the required level and form, with such material and in such manner as the Engineer shall determine; and if the price for such extra foundation is not in the schedule, then the price shall be determined as provided for in these specifications.

CEMENT

General conditions.

17. All cement shall be inspected.
Samples of cement which it is proposed to use in the work shall be submitted to the Board in such quantities and at such time and place as will enable it to make all required tests.

The Board reserves the right to reject any cement which is not satisfactory, whether for reasons mentioned in these specifications or for any good and sufficient cause. All rejected cement shall be at once removed from the work.

All cement shall be delivered on the work in approved packages bearing the name, brand or stamp of the manufacturer. It shall be kept under cover, thoroughly protected from moisture, raised from the ground and dry until used. The Contractor shall keep in storage a quantity of accepted cement sufficient to insure the uninterrupted progress of the work.

Every facility shall be provided by the Contractor and a period of at least twelve days allowed for the inspection and necessary tests.

A bag of cement shall contain 94 pounds of cement, net. Each barrel of Portland cement shall contain 4 bags.

Cement failing to meet the seven-day requirements may be held awaiting the results of the twenty-eight day tests before rejection.

All tests shall be made in accordance with the methods proposed by the Committee on Uniform Tests of Cement of the American Society of Civil Engineers, presented to the Society, January 21, 1903, and amended January 20, 1904, and January 15, 1908, with all subsequent amendments thereto, except that the specific gravity of the cement shall be taken in a pycnometer.

The acceptance or rejection shall be based on the following requirements:

Portland cement.

18. DEFINITION.—This term is applied to the finely pulverized product resulting from the calcination to incipient fusion of an intimate mixture of properly proportioned argillaceous and calcareous materials, and to which no addition greater than 3% has been made subsequent to calcination.

Specific gravity.

19. The specific gravity of the cement, dried at 212 F., shall not be less than 3.10.

Fineness.

20. It shall leave by weight a residue of not more than 8% on the No. 100, and not more than 25% on the No. 200 sieve.

Time of setting.

21. It shall not develop initial set in less than thirty minutes; and must develop hard set in not less than one hour, nor more than ten hours.

Tensile strength.

22. The minimum requirements for tensile strength for briquettes one inch square in section shall be within the following limits and shall show no retrogression in strength within the periods specified:

NEAT CEMENT.

Age.	Strength.
24 hours in moist air	150-200 lbs.
7 days (1 day in moist air, 6 days in water)	450-550 lbs.
28 days (1 day in moist air, 27 days in water)	550-650 lbs.

ONE PART CEMENT, THREE PARTS SAND.

Age.	Strength.
7 days (1 day in moist air, 6 days in water)	150-200 lbs.
28 days (1 day in moist air, 27 days in water)	200-300 lbs.

Constancy of volume.

23. Pats of neat cement about three inches in diameter, one-half inch thick at the center, and tapering to a thin edge, shall be kept in moist air for a period of twenty-four hours.

(a) A pat is then kept in air at normal temperature and observed at intervals for at least 28 days.

(b) Another pat is kept in water maintained as near 70° F. as practicable, and observed at intervals for at least 28 days.

(c) A third pat is exposed in any convenient way in an atmosphere of steam, above boiling water, in a loosely closed vessel for five hours.

These pats, to satisfactorily pass the requirements, shall remain firm and hard and show no signs of distortion, checking, cracking, or disintegrating.

Sulphuric acid and magnesia.

24. The cement shall not contain more than 1.75% of anhydrous sulphuric acid (SO²), nor more than 4% of magnesia (MgO).

MORTAR

- Proportions.** 25. Mortar shall be composed of one (1) part Portland cement and two (2) parts fine aggregate.
- Fine aggregate.** 26. The fine aggregate shall consist of any material of silicious, granite or igneous origin, free from mica and other impurities, in excess of five (5) per cent., and shall be of graded sizes, ranging from $\frac{1}{8}$ -inch down to that which will be retained on a No. 80 Standard sieve.
- Water.** 27. The water used in mixing the concrete shall be clean, free from oil, acid, strong alkalies or vegetable matter.

CONCRETE

- Proportions.** 28. In preparing the concrete, the cement and aggregate shall be measured separately, and then mixed in such proportions that the resulting concrete shall contain one (1) part Portland cement, two (2) parts fine aggregate and three (3) parts coarse aggregate.
- Coarse aggregate.** 29. The coarse aggregate shall be sound gravel or broken stone having a specific gravity of not less than 2.6. It shall be free from all foreign matter, uniformly graded and of sizes that will pass a 1-inch screen and be retained on a $\frac{1}{4}$ -inch screen.
- Mixing.** 30. The ingredients of the concrete shall be thoroughly mixed, sufficient water being added to obtain the desired consistency, and the mixing continued until the materials are uniformly distributed and each particle of the fine aggregate is thoroughly coated with cement and each particle of the coarse aggregate is thoroughly coated with mortar. All concrete shall be mixed by machine, no hand mixing will be allowed. All materials must be proportioned dry and then deposited in the mixer all at the same time. The mixer must produce a concrete of uniform consistency and color with the stones thoroughly mixed with the water, sand and cement. Batch mixers only may be used, continuous mixers will not be allowed.
- Consistency.** 31. The materials shall be mixed to produce a concrete of such consistency that the water will flush to the surface under tamping.
Re-tempering, that is, re-mixing with additional water, mortar or concrete that has partially hardened will not be permitted.
This consistency may be varied if required by the Engineer.
- Must be protected.** 32. When in place, all wheeling, working or walking on it must be prevented until it sufficiently set; and, if the Engineer shall require it, the Contractor must keep the freshly laid concrete covered with canvas or tarpaulins to protect it from the sun.

BRICK MASONRY

- Quality of brick.** 33. In the construction of brick masonry none but the best quality of whole bricks, burned hard entirely through and true in shape, shall be used; they must be culled as they are brought on the ground, and all bats or bricks of improper shape or quality shall be immediately removed from the work. The bricks must be whole, except as provided below, with edges straight and full, plane faces, parallel sides, and of uniform dimensions. After twenty-four (24) hours' immersion in water their absorption ratio by weight must not exceed fifteen per cent. (15%), and the co-efficient of breaking strength must not be less than 70 pounds per square inch. Vitrified brick will be used where shown on the drawings, and the cost of the same must be included in the price bid for sewer complete. Vitrified brick that will absorb more water than two per cent. of their weight dry, when broken across the middle and immersed in water for seventy-two hours, will not be considered as vitrified, and will be rejected.
- Brick to be saturated before laying, and to be laid in full bed of mortar.** 34. The bricks are to be thoroughly saturated with clean water immediately before laying. Every brick shall be neatly and truly laid to line, in a full joint of mortar, at one operation, and in no case shall mortar be slushed or grouted in after the brick is laid, except when so directed by the Engineer. All bricks must break joint with those in the adjoining courses.

STONE MASONRY

- Quality and size of cut stone.** 35. All cut stone shall be of the best quality of limestone, sandstone or freestone, and free from veins or shakes, or other flaws. The dimensions of the stone must correspond to those shown on the drawings for each particular case.
- How laid.** 36. Each stone shall be laid true to line on its natural or quarry bed, and in a full joint of mortar, which in no case shall exceed one-fourth ($\frac{1}{4}$) of an inch, and shall break joint with adjoining courses.
- How dressed and jointed.** 37. All stone must be dressed to the proper radius and curves, and the end joints vertical. No tooling or dressing will be allowed after the stone is in place. Each stone when laid shall be cleaned and moistened with clear water.

RUBBLE MASONRY

General conditions.

38. Rubble masonry will be used as shown on the plans, or whenever the Engineer may deem necessary. The quantity underneath and alongside the sewer will be varied to suit the character and elevation of the ground.

All exposed rubble masonry must be neatly pointed, and the tops of exposed rubble masonry walls must be coated one inch in thickness with Portland cement mortar.

The cost of the above-mentioned pointing and top-coating must be included in the price bid for rubble masonry.

The price bid per cubic yard for rubble masonry or concrete will include the cost of all necessary excavation for same.

Quality of stone.

39. All rubble masonry shall consist of the best quality of limestone, or stone equally as good.

Size and thickness of stone.

40. No stone shall be less than four (4) inches thick, nor less than one and one-half ($1\frac{1}{2}$) square feet of bed, except for filling small, unavoidable spaces; and the foundation stones must be of such sizes as will be satisfactory to the Engineer. Each stone must be laid horizontally, properly fitted and well bedded in a full bed of mortar, and driven down until the stones are brought in contact. All spaces between the stones must be filled with spalls driven into the mortar, and the stones must be clean and moist when laid; and the cleaning, wetting and dressing must be done before they are placed on the wall. While the stones are wet they must be so handled that no mud or dirt shall adhere to them.

Bond.

41. The larger stone shall be evenly distributed throughout the wall, one-fourth of them being used as headers. The practice of using only the largest stones for the front of the wall, and with their longest sides on the outer face, must be carefully avoided.

Stone must not be dumped upon wall.

42. The workmen will not be permitted to dump or throw the stone upon the wall; but the stones must be handled so as not to break the set of the joints already laid. When completed the work must be solid and free from voids.

PIPE SEWERS

Excavation.

43. So far as the specifications for the excavations, supporting the sides of the trenches, preparation of foundation and back-filling for the larger sewers can be made to apply to the construction of the pipe sewers, they are to be followed.

Quality of pipe.

44. The pipes furnished by the Contractor shall be of the best quality of vitrified clay SOCKET pipes, thoroughly burned, true in form and free from warps, cracks or imperfections of any kind, and shall be well and smoothly salt-glazed in the best manner over their entire inner and outer surfaces. All pipes and specials shall be subject to approval or rejection by the City Civil Engineer or his authorized representative.

Thickness of pipe.

45. No pipe shall have a less thickness than one-twelfth ($1/12$) of its internal diameter, and they must be uniform in thickness.

Curved pipes. Inspection.

46. When required, Y, curved, or any other form of pipes shall be furnished and laid.

47. Previous to being lowered into the trench each pipe shall be carefully inspected, and those not meeting the foregoing specifications shall be rejected and at once removed from the work. Before laying, the interior of the bell shall be carefully wiped smooth and clean. Pipes having any defects not sufficient, in the judgment of the Engineer, to warrant their rejection, shall be so laid as to bring these defects in the upper half of the sewer, and if the bell or spigot be broken, the defective place must be liberally covered with rich mortar.

The Engineer shall be notified when the pipes are to be laid in the trench, and none shall be covered until they have been inspected and approved by the Engineer or his authorized representative.

How laid.

48. Each pipe shall be laid in a firm bed and in perfect conformity with the lines and levels given. The bottom of the trench under each bell must be excavated so as to give the pipe a solid bearing for its full length. Unless otherwise ordered, the pipe shall be laid in the trench from the lower end upward. The Engineer may require the pipe to be laid with level, line or straight edge, or in any other manner that will produce the best result, and he may require that a light be set in the last manhole or lamp-hole, and that each joint of pipe be so laid that this light may be all the time visible through the section of the sewer under construction. When completed, the interior surface shall conform accurately to the grade and alignment fixed by the Engineer. Unless otherwise especially ordered, all sewers will be laid in a straight line from manhole to manhole. At least fifteen (15) feet of pipe shall at all times remain uncovered, except that they may be covered at the close of each day's work.

Before placing each pipe in position, the interior of the bell of the pipe previously laid shall be carefully wiped clean, so that the annular space shall be free from dirt or other foreign matter. Care must be taken to properly fill with mortar the annular space at the bottom and sides as well as the top of the joint. All water must be kept out of the bell-hole while the joint is being made. Extra precaution should be taken in wet ditches, and the Engineer may adopt such methods for laying pipe and use such material for making joints as he may see fit. Any excess of mortar on the inside of the pipe shall be immediately cleaned out after the joint has been finished; the Engineer may prescribe such methods as he may deem proper to insure that this shall be carefully done.

Iron pipes. 49. Iron pipe shall be used where specified or indicated on the plans. Unless otherwise specified, iron pipe shall be standard weight cast-iron waterpipe of the size indicated; and unless otherwise specified or permitted by the Engineer, they shall be laid with lead calked joints.

BRICK SEWERS

Masonry. 50. All brick work in the construction of brick sewers shall be in accordance with the requirements of "Brick Masonry" in the Specifications.

Quality of brick. The bricks are to be culled before laying, and at the expense of the Contractor, who shall furnish capable men for that purpose.

All bricks of any improper quality, and all "bats," except as hereinafter provided, shall be laid aside. The hardest and most regular shaped bricks shall be used in the invert of the sewer. Hard-burned bricks, less perfect than those required for the sewer, and a small proportion of "bats," all satisfactory to the Engineer, may be used in the outer ring of the sewer and manholes.

Brick to be saturated before laying, and to be laid in full bed of mortar. 51. The bricks are to be thoroughly saturated with clear water, immediately before laying. Every brick shall be neatly and truly laid in line, in full joint of mortar, at one operation; and in no case shall mortar be slushed or grouted in after the brick is laid, except when so directed by the Engineer. All bricks must break joints with those in the adjoining course.

Joints to be struck. 52. All joints below the springing line of the arch shall be neatly struck and the joints of the arch shall be cleaned off to the face of the brick work, after the centers have been removed. The joints between the courses of the inner ring shall not exceed one-quarter ($\frac{1}{4}$) inch, and the outer ring not more than one-half ($\frac{1}{2}$) an inch in thickness, and between the rings, or shells, there shall be one-half ($\frac{1}{2}$) an inch in thickness.

Thickness of joints. 53. The upper curve or arch shall be formed on strong centers of correct form and dimensions, according to the size and shape required. All centers for the curves shall be constructed to the required radius.

Centers. 54. The centers shall not in any case be struck until permission is given by the Engineer, and generally this permission will not be given till the back filling is into line at least as high as midway between the springing line and the crown of the arch, and particular care must be taken in drawing centers not to injure the work.

Striking of centers. 55. All inverts, or bottom curves, are to be worked according to forms, or templets, accurately made to the dimensions of the sewer and correctly set to grade; and all mortar or other material shall be carefully cleaned out before the center of the arch is set. Bricks of the inverts to be laid on a bed of mortar one-half ($\frac{1}{2}$) inch in thickness. For the inverts of brick sewers there shall be laid on concrete, if shown on plans, invert blocks, vitrified and salt glazed, of such dimensions and manner as shown on plans.

Inverts. 56. The joints of the work shall be so arranged to the satisfaction of the Engineer that the key course shall require to be tapped into its place with a hammer. The entire arch or upper half of the sewer to be covered with mortar one-half ($\frac{1}{2}$) inch in thickness.

Crown of arch. All fresh work shall be protected from injury, and no wheeling or walking on it will be allowed; and if any work be injured by drawing the centers, or from any cause whatever, the part damaged shall be taken down and rebuilt at the Contractor's expense.

Fresh work to be protected. 57. All brick work, as it progresses, must be racked back in courses, and in no case will it be allowed to be toothed, unless by a written permission of the Engineer. Intersections or entrances for lateral sewers, whether of brick or pipe, and all junctions for street drains, are to be built into the sewers at such places as shown on plan; eight (8) inch junctions for house drains to be placed through the bricks in a thorough and workmanlike manner, as shown on plans. Wherever required, the brick intersections are to be strengthened by backing up the angles with walls or piers of masonry. The junctions are to be bricked off at their ends, thoroughly closing them against sand or other material.

Courses to be racked back. 58. The centers of the intercepting sewers being struck, and all rubbish being removed from the inside of the sewer, and the whole interior of the sewer being washed perfectly clean, it shall receive, while still wet, a thin and perfectly smooth plastering of Portland cement mortar three-fourths of an inch thick, laid on with trowel over its whole surface of the inside. This plastering must not be soiled, or disturbed, or trodden upon for at least forty-eight hours after its application. Only intercepting sewers to be plastered.

Plastering of intercepting sewers. In building brick masonry, none but careful and skilled bricklayers shall be employed.

CONCRETE SEWERS

Quality of concrete. 59. The concrete to be used shall be in accordance with the requirements of concrete in these specifications.

- Finish.** 60. The inner face of the sewers shall be finished perfectly smooth. Care must be exercised that no off-set or rough surface occurs where forms are changed.
- Consistency.** 61. Unless ordered otherwise, the concrete for the lower half of the sewer and for any forms having an inside and outside casing, shall be of such consistency that it will fill the forms without ramming. The concrete must be thoroughly worked with a pole or otherwise, so that the mass will be thoroughly settled and free from voids .
The concrete for the upper half shall be of consistency in accordance with requirements of concrete in these specifications.
- Removal of forms.** 62. Forms shall not be removed in less than three (3) days after the concrete has been put in place, unless permission to the contrary is granted by the Engineer.
- Connecting with old work.** 63. In connecting new concrete with that previously placed, the section in place shall be thoroughly wet and then slushed with pure cement. This must be done immediately in advance of the new work.

REFILLING

- Proper tools and trusty men.** 64. After any sewer with its required foundations is laid or built, the work shall be carefully backed in and packed and rammed under and around the sewer with proper material, by trusty men, with proper tools; but no sewer or any part thereof shall be covered without orders from the Engineer or Inspector in charge of the work. In refilling, the earth or sand shall be faithfully rammed as such work progresses, in horizontal layers not exceeding six (6) inches in thickness. Special care must be taken in filling around the sewer to keep the earth at the same height on both sides of it, and in no case shall the number of men refilling be more than the number of those ramming. The trench must in all cases be filled to the proper grade, and in unimproved streets and rights of way due allowance must be made for the settlement of the material used in refilling.
The back filling shall be flushed thoroughly or tamped to the satisfaction of the Engineer and Board.
- Where pipe sewers are laid.** 65. Where pipe sewers are laid special care must be used. The earth must be carefully filled in so as not to disturb the pipes, and tamped or rammed solidly under and around them with proper tools for the purpose. The trench shall be filled in layers, as before described, and the layers for the first nine (9) inches above the top of the pipes shall be carefully thrown in with shovels, and not dumped from barrows or carts.
- Kind of earth to be used.** 66. The material excavated shall be refilled, except that whenever pipe sewers are laid the refilling for at least eighteen (18) inches above the top of the pipes shall be entirely free from stones.
- Removal of surplus material.** 67. As the trenches are filled in and the work completed, the Contractor shall remove all surplus earth, stone or other material from the ground, or to such places on the line of the work as the Board shall direct; but in no case shall any excavated material that will be required for refilling, be sold or taken off the work without the permission of the Board. If the Contractor fails to remove the surplus material, as required in this section, within twenty-four (24) hours after a written notification of the same, delivered to himself or his agent on the work, it will be removed by the Board of Public Works at the Contractor's expense.
- Deficiency of material.** 68. Should there be a deficiency of proper material for refilling, the Contractor will be required to furnish the same at his own expense and in all cases the streets, alleys or right-of-way must be refilled to the same height as previously existed, unless the Board shall otherwise direct.

EMBANKMENT

- Grubbing and clearing.** 69. The ground shall be prepared by thoroughly grubbing and clearing it, and removing all loose rock, stone, muck or improper material of every description; and the cost of same shall be included in the price bid per lineal foot of sewer.
- All sewers must be covered.** 70. All sewers and foundations, when completed, shall be covered with not less than three (3) feet of earth at any point. In case there is not sufficient earth on the work for this purpose, the Contractor must provide suitable earth.

BRANCHES

- Branches.** 71. Branches will be built at such points as shown on the plans, of the dimensions there shown, and will be paid for per lineal foot. Parapet or wing walls to connections to be paid for as rubble masonry.

LATERALS

- Laterals.** 72. Laterals shall be built at such points as shown on plans of the dimensions there shown and will be paid for per lineal foot. Unless ordered to the contrary.

SLANTS AND Y BRANCHES

In brick or concrete sewers.

73. In brick or concrete sewers, slants or branches of stoneware pipes, equal in all respects to those provided for in these Specifications, shall be built in at such intervals, at such heights and angles and of such sizes as may be determined by the Engineer, and their inner ends must be carefully set flush with the inner face of the sewer. Trimming the inner end of the slants will be allowed only in unavoidable cases.

In pipe sewers.

74. In pipe sewers, six-inch Y-branches for house connections must be built in at such intervals as may be determined by the Engineer. Such other slants, or Y-branches, as the Engineer may consider necessary to be built in any sewer for connecting lateral sewers, catch-basins, or for any other purpose, must be built in accordance to his instructions. All slants, or Y-branches, must have proper socket on the outer end; and when not immediately used must be closed by a cover made for the purpose and approved by the Engineer; the cost of said covers to be included in the price bid for Y-branches.

HOUSE CONNECTIONS

Where laid.

75. House connections, where shown by the plans or directed by the Engineer, shall be constructed of vitrified pipe, in accordance with requirements of these specifications, extending from the sewer to the property line unless otherwise indicated by the drawings or elsewhere in the specifications. When not immediately used, the pipe must be closed at the ends by covers made for the purpose. Unless otherwise ordered, the diameter of house connections shall be six (6) inches and the pipe shall have a grade not less than one-eighth ($\frac{1}{8}$) inch per foot. The depth of house connections will be given by City Engineer and must be of such depth as will give best service to property benefited.

Not to be connected until finished.

76. The contractor shall allow no one to make connection with the sewer except on written order from the Board, and he shall be held responsible for any connections made while the sewer is in his charge. Additional connections shall not be inserted without authority from the Board.

Mark by stakes.

77. The contractor shall designate the location of house connections, under the direction of the Inspector, by stakes at least eighteen (18) inches long and one and one-half ($1\frac{1}{2}$) inches square, driven flush with the ground just inside the property line.

MANHOLES

Locations. Materials.

78. Manholes shall be constructed at such points as shown on plans or as the Engineer may direct, and shall be constructed of brick masonry equal in all respects to that provided for in these specifications. The price bid for manholes for pipe sewers to include the cost of the cast-iron cover and steps and the sewer included within the manholes.

They shall in all cases be built according to drawings now on file in the City Engineer's Department.

CATCH-BASINS OR INLETS

Where to be built.

79. Catch-basins or inlets must be built where shown on the plan of the work, or at such places as the Engineer may designate.

Must be according to drawings.

80. They must be built according to drawings on file in the City Engineer's Department, and connected with sewers by vitrified pipes of such size as may be determined by the Engineer. They shall be constructed of brick masonry equal in all respects to that provided for in these specifications. All catch-basins when filled with water shall show no leakage.

Resetting curb.

81. The cost of resetting curb, or repaving of street or sidewalks deemed necessary by the Engineer, adjacent to the catch-basins or inlets constructed, must be included in price bid for catch-basins and inlets.

CASTINGS

82. Cast-iron covers, traps and frames, of the form and dimensions shown on drawings, on file in the office of the Engineer's Department of the Board of Public Works, are to be furnished and set in place by the contractor, and the cost of the same must be included in the price bid for manholes, inlets and catch-basins complete. All castings shall be of the best grade of gray iron, smooth and true in shape.

RESTORATIONS OF STREETS, WALKS, ETC.

Cleaning up. 83. As the work progresses, the contractor must remove from the line of the work, at his own expense, all surplus material and debris of every kind and description. He must also restore to their former condition, all streets, sidewalks, cross-walks, parks, pavements, curbs, fences and other public and private property which may have been disturbed or damaged by reason of his work.

The work under these specifications will not be finally accepted until the foregoing conditions have been carried out.

Upon the temporary discontinuation of the work, all materials are to be piled up snugly and safely, so as not to impede travel on the sidewalk, roadways or driveways, or to interfere with the use of fire plugs or of drainage.

GENERAL SPECIFICATIONS

84. **Materials.** All sewers and their appurtenances shall be constructed of the materials described and of the dimensions shown on the Plans and Specifications prepared for each particular case.

85. **Measurement.** No extra or customary measurements of any kind will be allowed in measuring the work under these Specifications; but the actual length, area, solid contents or number shall only be considered, and the length shall be measured on the center lines of the work, whether straight or curved. No extras of any kind will be allowed unless ordered in writing by the Board of Public Works, and the price for such agreed upon in advance; and all claims for extra labor or materials, or for damages, or for any other matter or things for which the Contractor may consider himself entitled to extra remuneration, must be made in writing before the extra labor or materials are furnished, or at the time the damages occur or cause for the claim arises, and no claim will be considered which has not been so presented to the Engineer.

86. **Contractor to Furnish Material.** The whole of the labor and materials of every description necessary to carry out and complete the work let in any contract under these Specifications shall be furnished by the Contractor at his own expense, and the whole of said work must be executed to the full satisfaction of the Board in every respect.

87. **Work at Contractor's Risk.** It is understood that the whole of the work embraced under these Specifications is to be done at the Contractor's risk, and he is to assume the responsibility and risk of all damages to the work or to the property on the line of said work, which may result from floods, back-water, caving of the street or alley, settling of the foundations of buildings, or from any other causes whatever connected with the construction of said work. No extension of time will be allowed for finishing the work, except as herein specified, it being understood and agreed that the Contractor must take the risk of any and all delays arising from the nature of the work, or from any unforeseen obstruction or difficulties which may be encountered in doing the work, or from any action of the elements or otherwise.

88. **Protection of Work.** When, in the opinion of the Board, the weather may be such that it is deemed advisable to discontinue the work until the following spring, the Contractor is required, on notice to that effect from the Board, to place the work in proper condition for the accommodation and protection of the public for the winter season, and for the protection of the work against snow, frost or ice; and in the event of his failing to do so within the space of forty-eight hours after having been notified to do so, the Board of Public Works shall have the power to take whatever steps it may deem necessary to the interest of the public, and for the protection of the work, and all expenses so incurred by reason of such action shall be paid by the Contractor before the final acceptance of the work. Unless with the written permission of the Board, no work of any description liable to be injured by the action of frost shall be carried on during freezing weather, but it shall be properly covered, protected and guarded, and work shall not be resumed thereon without the written consent of the Board.

89. **Replacing Material.** No materials of any kind shall be used until they have been examined and approved by the Board, who shall have full power to condemn any work or materials not in accordance with the specifications, and to require the Contractor to remove any work or materials so condemned, and at his own expense to replace the said work or materials to the satisfaction of the Board. In case the Contractor shall neglect or refuse, after written notice to remove or replace said rejected work or materials, they shall be removed and replaced by the Board of Public Works at the Contractor's expense.

90. **Change in Plans.** The right is expressly reserved to the Board of Public Works to order the omission of any portion of the work or materials called for by the Plans and Specifications, or to order any addition thereto, or to make any alteration whatever in the nature of the work or materials called for therein; provided the said order be in writing, and the amount of compensation to be added to or deducted from the contract price for such addition or omission shall be determined and fixed by a written agreement between the Contractor and the Board of Public Works, and in case they should fail to agree upon the amount to be so added or deducted, then the amount shall be determined by the Engineer, whose decision in writing shall be accepted as final and binding upon both parties. And it is expressly agreed and understood that such alteration, addition or omission shall not in any way violate or annul this contract; and the Contractor hereby agrees not to claim or bring suit for damages, whether by loss of profits or otherwise, on account of not being allowed to do such work or furnish such materials.

91. **Contractor to Verify, Etc.** Bidders must examine for themselves the location of the proposed work, and exercise their own judgment as to the nature of the excavations to be made, and the whole of the work to be done; and the Contractor must assume all risk of variance in any computations or statements of amounts or quantities necessary to complete the work required by the contract, by whomsoever made, and agrees fully to complete said work in accordance with the Plans and Specifications, for the prices herein specified.

92. **Failure to Properly Carry on Work.** It is also understood that in case of failure to execute the work or furnish materials in accordance with the Plans and Specifications, to the satisfaction of

the Board of Public Works, or to proceed with the same rapidly enough in the estimation of the Board of Public Works to secure its completion within the time allowed by the contract, then it shall be lawful for the Board of Public Works (after giving three days' written notice of its intention so to do, by serving the notice on the Contractor, or his agent or foreman on the work, and if there be more than one person contracting to do said work, then by such service upon either of them), to employ any other person or persons, either by contract, day's work or otherwise, to proceed with said work and complete the same; and to charge all sums paid such person or persons as so much money paid to the Contractor. And if the sum so paid shall exceed the sum due the Contractor under his contract then the said Contractor shall become liable to the City for any sum by which the expense of so doing the work shall exceed the sum due under his contract as liquidated damages, and not by way of penalty; and the Board may annul and determine the contract, which shall thereupon become null and void, except as to any right of action which may accrue to said City by reason of the neglect of the Contractor to do the work in the time and manner prescribed by the contract and these Specifications. And said Contractor further agrees that all work theretofore done, at the time the contract is so declared void, shall at once pass to and become the property of the said City, without any payment therefor, and covenants that he will not make any claim or bring any suit for the value of such work or materials.

93. **Sewers, Etc., to Be Clean.** The sewers and appurtenances as built must be kept thoroughly clean, and the catch-basins shall not be filled with water without the consent of the Engineer or Inspector, who shall examine the same to see that all rubbish or material has been removed.

94. **Sub-Contracts.** The Contractor will not be allowed to sublet the whole or any part of this work, or make an assignment of the moneys to be paid to him, without special permission in writing from the Board of Public Works, and should this provision be violated, the said Board may, at its option, end and determine his contract. Any subletting or assignment of the contract shall in nowise affect the conditions or provisions of the contract or specifications.

95. **Employees.** The Contractor shall dismiss from the work any employe who may, in the opinion of the Engineer or Board, be considered guilty of misconduct or neglect of his duties, or perform his work in an improper manner.

96. **Removal of Obstructions.** The Contractor will be required to remove at his own expense, any and all obstructions, whether old stone, brick or wooden sewer, or logs, filth, trees, stumps, or refuse of any kind, that may be encountered in the line of his work, and which may be required to be taken out in order to construct the new work. The material in such obstructions will be considered the property of the Contractor, except castings as herein specified. All castings, gutter and man-hole plates along the line of the work shall be taken out and removed by the Contractor and will be retained as the property of the City.

97. **Price Must Include, Etc.** Bidders must state in their proposal the price per lineal foot for all sewers complete as designated and required, which price must include all labor and materials, centering, sheeting and bracing used in the construction of the work, pumping or bailing, with all other costs incidental to the proper completion of the work, the cost of street restoration work as per paragraphs of these Specifications, together with the repair of any damage which may occur to the sewer or its appurtenances on account of any defective or negligent work on the part of the Contractor during a period of three years from the date of the completion of the work; and the Contractor and his sureties will not be released from any liability until the final certificate of the Board is given at the expiration of the said years.

98. **Indemnity.** The Contractor shall keep the City of Fort Wayne free and harmless from the payment of any and all damages, costs, expenses, royalties, patent fees, attorney's fees or any sum of money whatsoever, by reason of any actions, claims, demands or proceedings, arising out of any infringement, or alleged infringement, or use of any patent or patented device, article, system or arrangement that may be used by the Contractor in the execution of his work. And the Contractor will be required to indemnify and save harmless the City of Fort Wayne from all claims or actions of any kind or description made or brought against the City for, or on account of, any injuries or damages received or sustained by any person or persons in the work of construction, or by or in consequence of any neglect in guarding the same or in any improper materials used, or by or on account of any act of commission or omission of the Contractor or his agents or employes.

99. **Intersecting Culverts, Etc.** In case any of the lines of the new sewers built under these Specifications shall intersect any culverts, sewers or house connections previously existing and still in use, so much of the said culverts, sewers or house connections as may, in the opinion of the Engineer, be necessary, shall be taken up and rebuilt, relaid or extended, as the case may require, so as to connect in a proper manner with the new sewer. All old sewers on or near the line of the work that are rendered useless by the construction of the new sewers must be taken out or filled solidly with good earth, well rammed, as the Engineer may decide; and the price for this work shall be determined in the manner provided in these Specifications for extra work.

100. **Liable For Inspectors' Wages.** Whenever the Contractor fails to complete the work as herein specified within the time named, he shall pay the wages of the inspectors on the work at the rate of Two Dollars and Fifty Cents (\$2.50) per day for each inspector from the above specified time to the

date of the completion of the work, and such amount of wages shall be paid to the City of Fort Wayne before the final acceptance of the work. And in case of any legal obstructions to the prosecution of the work, the delay shall operate to extend the time for the completion of the part or parts of the work obstructed for the length of time the obstruction continues and no longer; but no damages shall be claimed or allowed the Contractor for any such delay.

101. Payment of Men, Etc. The Contractor must pay all men employed on the work in cash regularly; the truck system will in nowise be permitted; no ticket shall be issued to the men; nor will the Contractor be permitted to sell or allow to be sold on the work any beer or spirituous liquors, and he will be required to prevent any control being exercised over the workmen as to their freedom and choice of market or prices. Any breach of this clause shall entitle the Board of Public Works at once, without notice, to determine and annul this contract, which shall thereupon become null and void, except as to any right of action which may accrue to said City by reason of the non-completion of the work. And if the contract be so annulled and determined, all work which has been done, all money in the hands of the Board of Public Works which may have been earned, shall at once pass to and become the property of the City without any payment therefor. And the Contractor hereby covenants that in case the contract be so annulled he will not make any claim for the value of such work, or any part thereof.

102. Specifications to Be Carried Out. Said party of the first part further expressly covenants and agrees to do everything required to be done by these Specifications hereunto attached and made part of this agreement, and to refrain from doing everything forbidden by such Specifications; that the power reserved to or conferred upon any body or person in said Specifications may be exercised by such body or persons, and the right shall be reserved to the Board of Public Works to order the omission of or addition to any portion of the work or materials called for by the Plans and Specifications, or to make any alterations whatever in the nature of the work or materials called for therein, provided the said order be in writing. And further agrees that the amount of compensation to be paid them for any additional work shall be at contract prices, if such additional work shall be of a class provided for in the bid and contract; and in case any portion of the work is omitted, that they will waive all claims for damages, and will not demand any pay for the portion so omitted. In case the Contractor shall be required to do any work of a class not provided for in the bid and contract, they still further agree that the amount to be allowed them shall be fixed by a written agreement between the Contractor and the Board of Public Works before such work is begun; and in case they should fail to agree upon the price to be allowed for such work, then the same shall be fixed by the Engineer, whose decision, in writing shall be final and binding.

103. May Cause Work to Be Taken Up, Etc. The party of the first part especially agrees that the Board of Public Works or the Engineer may cause any work or materials not in accordance with the Specifications or contract to be taken up, removed and relaid at their expense; and further agrees to be bound by all the terms of the Specifications.

104. Extra Work. In no case shall the Contractor be entitled to claim or receive any pay beyond the contract price, with such additions as may have been ordered and fixed as heretofore provided, nor any damages, unless claim is filed for such pay or damages with the Board of Public Works, and also with the Engineer, before proceeding with the work for which claim is made for such additional pay or damages; and in case any claim for additional pay or damages be thus made, then, unless agreement about claim be made between the Contractor and said Board within three days after the claim is filed, the Engineer shall fix the amount (if any) which the Contractor shall receive for such additional work or damages, and the amount so agreed upon or fixed shall be indorsed on the claim filed by the Contractor, and such amount shall also be entered upon the minutes of said Board; and in case the Contractor proceeds with the work on which claim has been made for additional pay for damages, before the amount (if any) to be paid is ascertained and indorsed upon the claim, as above provided, then any claim for such additional pay or damages shall be deemed to have been waived.

105. Payment for Labor and Material. The first party further contracts and agrees to pay any and all moneys due to any contractor, or any person or persons furnishing any material whatever for said work, and to pay in full any laborers employed for any work done in the prosecution of such improvement.

106. Preference to Local Labor. It is further provided and stipulated that the party of the first part shall give to residents of said City preference in employment of all labor necessary in the performance of this contract.

107. Guarantee. The work shall be done in such a substantial manner that no repairs will be required for a period of three (3) years. Should repairs become necessary, however, during any such period, then the Contractor will be required to make good any damage to the work or any defect in the workmanship, materials or condition of the work which may have occurred during said period, and which made such repairs necessary. The guarantee period shall date from the time of approval of the final assessment roll by the Board of Public Works. Said Contractor shall keep said work in good repair during the time of the guarantee period, and shall make all repairs at such time as directed by the Board of Public Works. It is understood and agreed that this guarantee shall cover all repairs growing out of the imprefection or unsuitability of materials or composition, too great or too little moisture, all defects in workmanship, extremes of heat or cold and all other effects of climate. The determin-

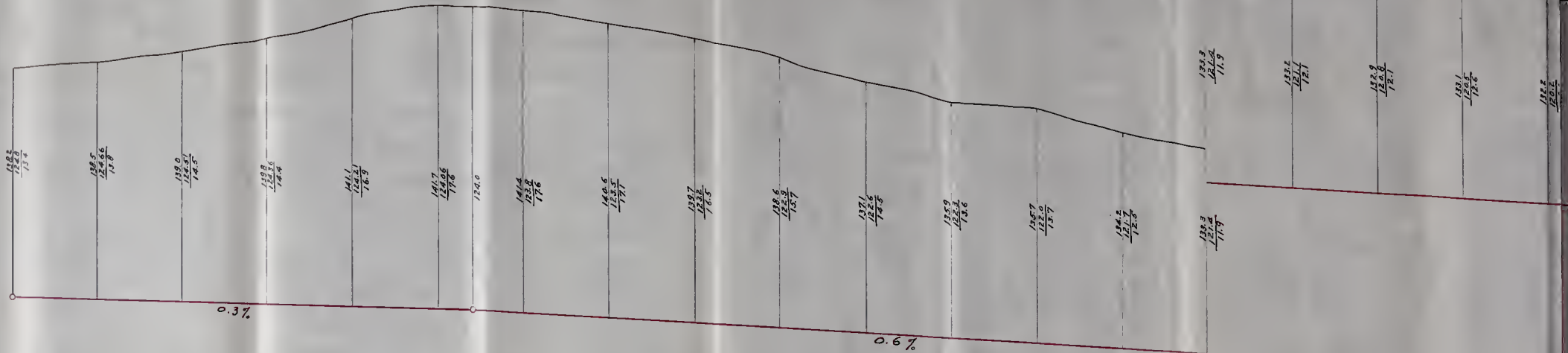
ation of the necessity for repairs shall rest entirely with the Board of Public Works, whose decision upon the matter shall be final and obligatory upon the Contractor.

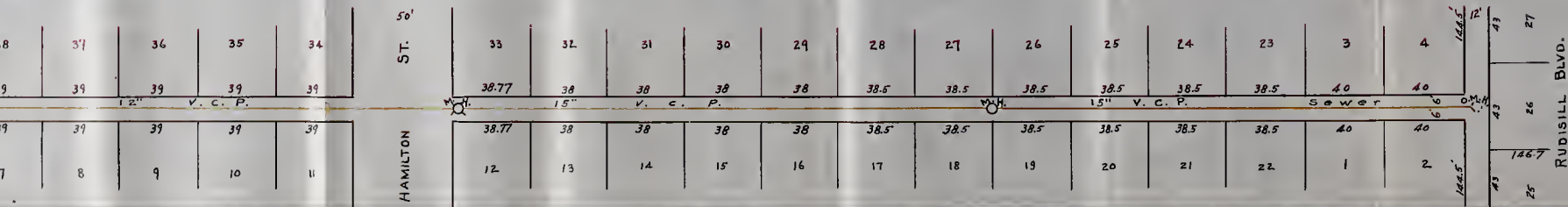
108. **Board May Make Repairs.** If at any time within the guarantee period the Contractor shall fail or refuse to make the necessary repairs as herein required, after ten (10) days' notice by mail has been given him by the Board of Public Works so to do, the said Board may proceed to have said repairs done in any manner and by whomsoever it may deem best, and charge the cost of same to the Contractor, together with an addition of twenty per cent. of said amount to cover cost of supervision and inspection of the work, the whole sum to be recovered by the City by suit upon the bond of the Contractor: Provided, that if the Contractor fails to repair the work after having been notified, as above, said Board may thereupon let the work, and the cost of such repairs shall be paid by the City and the amount collected by suit, from the Contractor or from his bondsmen.

109. **Bond.** As an additional guarantee that the Contractor will properly repair and maintain the sewer improvement for the guarantee period, as above provided: The Contractor within ten (10) days after being awarded the contract will be required to execute to the City of Fort Wayne two bonds to be fixed by the Board of Public Works, one conditioned that he will faithfully comply with all the provisions of the contract, of which the Plans, Profiles and Specifications herein will be made a part, and the other conditioned that he shall perform and fulfill all the requirements of the warranty and maintenance contained in said Contract and will make all repairs required under said warranty and in the manner provided for in the Contract. Each of said bonds to be signed by a recognized Surety Company authorized to sign such instruments and authorized to do business in the State of Indiana.

110. **Payment of Work.** The party of the second part hereby agrees and binds itself, upon ascertaining that the party of the first part has made the proper affidavit and that the contract has been fully completed in a good, substantial, and workmanlike manner, as set forth in the Specifications and this agreement, and that each and every one of the stipulations hereinbefore mentioned have been complied with, to apportion the cost of the work under this contract against the property holders benefited and upon the City of Fort Wayne, if the City is benefited by said improvement, all according to the method and manner provided for in Act of the General Assembly of the State of Indiana, entitled "An Act Concerning Municipal Corporations," approved March 6, 1905, and in accordance with and pursuant to the provisions of all acts amendatory and supplemental thereto. Assessments, if deferred, are to be paid in ten equal annual installments, with interest at the rate of five percent. per annum. A bond or bonds shall be issued to the Contractor in payment for such work, unless the property owners pay said assessments before said bond or bonds are issued. Under no circumstances shall the City of Fort Wayne be or be held responsible for any sum or sums due from said property owner or owners for said work, or for the collection of same, or for the payment of any bond or bonds, certificate or certificates, issued to said Contractor in payment for such work, except for such moneys as shall have been actually received by the City from the assessments for such improvement, or such moneys as said City is by said above entitled Act required to pay. All proceedings had, and work done in the making of said improvement, assessment of property, collections of assessments and issuance of bonds therefor, shall be as provided for in said above entitled Act.

WEISSER PARK





PETITION

Fort Wayne,

MARCH 15th, 1915.

TO THE BOARD OF PUBLIC WORKS OF THE CITY OF FORT WAYNE:

Gentlemen:

The undersigned, owners of real

estate on Hanna St.,, fromWeisser Park

to

Rudisill Blvd.,

respectfully petition for the passage of a resolution providing for

An Alley Sewer immediately east of Hanna St., from Weisser Park to the first alley north of Rudisill Blvd., connecting with the main sewer now being constructed.

Frank J. Federspiel
George Jaeger

3409 Hanna St.
3331 Hanna St.

Petition for Passage

of a Resolution for

Reverend Earl of Howards

from *Merion Paul*

to *the Mayor and Aldermen of*

Filed With the Board of Public Works

March 18th 1915



For Constructing

the _____ day of _____ 191_____

Wm. J. Kelly

And they

Henry Williams
Board of Public Works.

Fort Wayne, Indiana.

April-18-1916.

PETITION.

To The Honorable Board of Public Works of the City of
Fort Wayne, Indiana.

Gentlemen:

We the undersigned owners of Pughs Out Lots
Nos-1-2-3 respectfully petition for the construction of
a sewer from the North line of Pughs Out Lot No. 3, beginning
about 150 feet east of Hanna St. then south through our
respective lots and south through the first alley east of
Hanna St. through Weisser Park Addition, and Grand Blvd.
Addition, to connect with the main sewer just north of
Rudisill Blvd. and we hereby grant and give the City of
Fort Wayne, Indiana an easement for a sewer through our
respective lots as indicated above.

Frank J. Federspiel Seal.

Eli. Hoffman. Seal

Herman Rost Seal

Anna Rost Seal

George Jaeger Seal

Anna Jaeger Seal

Petition for Sewer
East of Hanna Street from
the north line of Coughlin's
O. R. N^o 3 to sewer north
of Rudisill Boulevard.

Plan ordered April 27th
1916

THE GLOBE LEGAL WRAPPER, Patented Feb. 11, 1890. FIRST QUALITY,

DIRECTIONS.—Elevate the metal points—attach the manuscript—then bend the points down flat—dampen the gummed flap and stick it down—this fastens the papers and hides the metal.